SEQUENCE LISTING

SEQ ID NO: 1 (human CatSper2 cDNA sequence - variant A2)

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ATGGCCGCTT ACCAACAAGA AGAGCAGATG CAGCTTCCCC GAGCTGATGC 0050
CATTCGTTCA CGTCTCATCG ATACTTTCTC TCTCATTGAG CATTTGCAAG 0100
GCTTGAGCCA AGCTGTGCCG CGGCACACTA TCAGGGAGTT ACTTGATCCT 0150
TCCCGCCAGA AGAAACTTGT ATTGGGAGAT CAACACCAGC TAGTGCGTTT 0200
CTCTATAAAG CCTCAGCGTA TAGAACAGAT TTCACATGCC CAGAGGCTGT 0250
TGAGCAGGCT TCATGTGCGC TGCAGTCAGA GGCCACCTCT TTCTTTGTGG 0300
GCCGGATGGG TCCTTGAGTG TCCTCTCTTC AAAAACTTCA TCATCTTCCT 0350
GGTCTTTTTG AATACGATCA TATTGATGGT TGAAATAGAA TTGCTGGAAT 0400
CCACAAATAC CAAACTATGG CCATTGAAGC TGACCTTGGA GGTGGCAGCT 0450
TGGTTTATCT TGCTTATTTT CATCCTGGAG ATCCTTCTTA AGTGGCTATC 0500
CAACTTTTCT GTTTTCTGGA AGAGTGCCTG GAATGTCTTT GACTTTGTTG 0550
TTACCATGTT GTCCCTGCTT CCCGAGGTTG TGGTATTGGT AGGGGTAACA 0600
GGCCAATCGG TGTGGCTTCA GCTTCTGAGG ATCTGCCGGG TGCTGAGGTC 0650
TCTCAAACTC CTTGCACAAT TCCGTCAAAT TCAAATTATT ATTTTGGTCC 0700
TGGTCAGGGC CCTCAAGAGC ATGACCTTCC TCTTGATGTT GCTGCTCATC 0750
TTCTTCTACA TTTTTGCTGT GACTGGTGTC TACGTCTTCT CAGAGTACAC 0800
CCGTTCACCT CGTCAGGACC TGGAGTACCA TGTGTTCTTC TCGGACCTCC 0850
CGAATTCCCT GGTAACAGTG TTCATTCTCT TCACCTTGGA TCATTGGTAT 0900
GCACTGCTTC AGGACGTCTG GAAGGTGCCT GAAGTCAGTC GCATCTTCAG 0950
CAGCATCTAT TTCATCCTTT GGTTGTTGCT TGGCTCCATT ATCTTTCGAA 1000
GTATCATAGT AGCCATGATG GTTACTAACT TTCAGAATAT CAGGAAAGAG 1050
CTGAATGAGG AGATGGCGCG TCGGGAGGTT CAGCTCAAAG CTGACATGTT 1100
CAAGCGGCAG ATCATCCAGA GGAGAAAAAA CATGTCACAT GAAGCACTGA 1150
CGTCAAGCCA TAGCAAAATA GAGGACAGAG GAGCTAGTCA ACAAAGGGAA 1200
AGTTTGGACT TATCAGAAGT GTCTGAAGTA GAGTCTAATT ATGGTGCCAC 1250
TGAAGAGGAT TTAATAACAT CTGCATCAAA AACAGAAGAG ACCTTGTCAA 1300
AAAAGAGAGA GTACCAGTCT TCCTCCTGTG TCTCCTCCAC ATCCTCTTCC 1350
TATTCTTCCT CTTCTGAATC CAGATTTTCT GAATCTATTG GTCGTTTGGA 1400
CTGGGAGACT CTTGTGCACG AAAATCTGCC CGGGCTAATG GAAATGGATC 1450
AGGATGACCG TGTTTGGCCC AGAGACTCAC TCTTCCGATA TTTTGAGTTG 1500
CTAGAAAAGC TTCAGTATAA CCTAGAGGAA CGTAAGAAGT TACAAGAGTT 1550
TGCAGTGCAG GCACTGATGA ACTTGGAAGA CAAGTAA 1587
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SEQ ID NO: 2 (human CatSper2 protein sequence - variant A2)

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MAAYQQEEQM QLPRADAIRS RLIDTFSLIE HLQGLSQAVP RHTIRELLDP 0050
SRQKKLVLGD QHQLVRFSIK PQRIEQISHA QRLLSRLHVR CSQRPPLSLW 0100
AGWVLECPLF KNFIIFLVFL NTIILMVEIE LLESTNTKLW PLKLTLEVAA 0150
WFILLIFILE ILLKWLSNFS VFWKSAWNVF DFVVTMLSLL PEVVVLVGVT 0200
GQSVWLQLLR ICRVLRSLKL LAQFRQIQII ILVLVRALKS MTFLLMLLLI 0250
FFYIFAVTGV YVFSEYTRSP RQDLEYHVFF SDLPNSLVTV FILFTLDHWY 0300
ALLQDVWKVP EVSRIFSSIY FILWLLLGSI IFRSIIVAMM VTNFQNIRKE 0350
LNEEMARREV QLKADMFKRQ IIQRRKNMSH EALTSSHSKI EDRGASQQRE 0400
SLDLSEVSEV ESNYGATEED LITSASKTEE TLSKKREYQS SSCVSSTSSS 0450
YSSSSESRFS ESIGRLDWET LVHENLPGLM EMDQDDRVWP RDSLFRYFEL 0500
LEKLQYNLEE RKKLQEFAVQ ALMNLEDK 0528
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SEQ ID NO: 3 (human CatSper2 cDNA sequence - variant C1)

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ATGGCCGCTT ACCAACAAGA AGAGCAGATG CAGCTTCCCC GAGCTGATGC 0050
CATTCGTTCA CGTCTCATCG ATACTTTCTC TCTCATTGAG CATTTGCAAG 0100
GCTTGAGCCA AGCTGTGCCG CGGCACACTA TCAGGGAGTT ACTTGATCCT 0150
TCCCGCCAGA AGAAACTTGT ATTGGGAGAT CAACACCAGC TAGTGCGTTT 0200
CTCTATAAAG CCTCAGCGTA TAGAACAGAT TTCACATGCC CAGAGGCTGT 0250
TGAGCAGGCT TCATGTGCGC TGCAGTCAGA GGCCACCTCT TTCTTTGTGG 0300
GCCGGATGGG TCCTTGAGTG TCCTCTCTTC AAAAACTTCA TCATCTTCCT 0350
GGTCTTTTTG AATACGATCA TATTGATGGT TGAAATAGAA TTGCTGGAAT 0400
CCACAAATAC CAAACTATGG CCATTGAAGC TGACCTTGGA GGTGGCAGCT 0450
TGGTTTATCT TGCTTATTTT CATCCTGGAG ATCCTTCTTA AGTGGCTATC 0500
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CAACTTTTCT GTTTTCTGGA AGAGTGCCTG GAATGTCTTT GACTTTGTTG 0550
TTACCATGTT GTCCCTGCTT CCCGAGGTTG TGGTATTGGT AGGGGTAACA 0600
GGCCAATCGG TGTGGCTTCA GCTTCTGAGG ATCTGCCGGG TGCTGAGGTC 0650
TCTCAAACTC CTGCACAAT TCCGTCAAAT TCAAATTATT ATTTTGGTCC 0700
TGGTCAGGGC CCTCAAGAGC ATGACCTTCC TCTTGATGTT GCTGCTCATC 0750
TTCTTCTACA TTTTTGCTGT GACTGGTGTC TACGTGTTCT CAGAGTACAC 0800
CCGTTCACCT CGTCAGGACC TGGAGTACCA TGTGTTCTTC TCGGACCTCC 0850
CGAATTCCCT GGTAACAGTG TTCATTCTCT TCACCTTGGA TCATTGGTAT 0900
GCACTGCTTC AGGACGTCTG GAAGGTGCCT GAAGTCAGTC GCATCTTCAG 0950
CAGCATCTAT TTCATCCTTT GGTTGTTGCT TGGCTCCATT ATCTTTCGAA 1000
GTATCATAGT AGCCATGATG GTTACTAACT TTCAGAATAT CAGGAAAGAG 1050
CTGAATGAGG AGATGGCGCG TCGGGAGGTT CAGCTCAAAG CTGACATGTT 1100
CAAGCGGCAG ATCATCCAGA GGAGAAAAAA CATGTCACAT GAAGCACTGA 1150
CGTCAAGCCA TAGCAAAATA GAGGACAGGT CGTTTGGACT GGGAGACTCT 1200
TGTGCACGAA AATCTGCCCG GGCTAATGGA AATGGATCAG GATGA      1245
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SEQ ID NO: 4 (human CatSper2 protein sequence - variant C1)

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MAAYQQEEQM QLPRADAIRS RLIDTFSLIE HLQGLSQAVP RHTIRELLDP 0050
SRQKKLVLGD QHQLVRFSIK PQRIEQISHA QRLLSRLHVR CSQRPPLSLW 0100
AGWVLECPLF KNFIIFLVFL NTIILMVEIE LLESTNTKLW PLKLTLEVAA 0150
WFILLIFILE ILLKWLSNFS VFWKSAWNVF DFVVTMLSLL PEVVVLVGVT 0200
GQSVWLQLLR ICRVLRSLKL LAQFRQIQII ILVLVRALKS MTFLLMLLLI 0250
FFYIFAVTGV YVFSEYTRSP RQDLEYHVFF SDLPNSLVTV FILFTLDHWY 0300
ALLQDVWKVP EVSRIFSSIY FILWLLLGSI IFRSIIVAMM VTNFQNIRKE 0350
LNEEMARREV QLKADMFKRQ IIQRRKNMSH EALTSSHSKI EDRSFGLGDS 0400
CARKSARANG NGSG                                       0414
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SEQ ID NO: 5 (murine CatSper2 cDNA sequence)

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ATGGCACAAG AACAAGGACA TTTCCAGCTG CTCAGAGCTG ATGCTATCCG 0050
TTCAAAGCTC ATTGACACTT TCTCGCTCAT AGAGCATTTG CAGGGCTTGA 0100
GCCAAGCCGT ACCAAGGCAC ACTCTCCGGG AGATACTTGA TCCTGCTTAC 0150
CAGCAGAAAC TCATGTCAGG AGATCAGGAG CAGCTAGTGC GCTTCTCCAT 0200
AAAGCCTCGG CGAATGGGGC ACATCACACA CTCGCGGCGG TTGCTGAGCA 0250
GGCTTCGCGT GCGGTGCAGT CGAATGCCCC CTCTTTCCTT GTGGGCTGGA 0300
TGGGTCCTTG ATAGTTCTGT CTTCTCGAAA TTCATCATCT CCCTCATCTT 0350
TCTGAACACC TTTGTGCTGA TGGTTGAAAT AGAATTGATG GAATCCACAA 0400
ATACTGCTCT GTGGCCAGTG AAGCTGGCTT TGGAGGTGGC AGATTGGTTC 0450
ATCTTGCTTA GCTTCATTGT AGAGATACTT CTAATGTGGT TGGCCAGTTT 0500
TTCTCTCTTC TGAAGGATG CCTGGAATGT CTTTGACTTT TTTGTTACCT 0550
TGTTGTCTCT GCTTCCTGAG TTAGTAGTGC TGTTAGGAGT CCCAGCACAC 0600
TCTGTGTGGC TCCAGCTGCT GAGGGTCTGT CGGGTGCTGA GGTCTCTCAA 0650
ACTGTTTGCA CGATTCCGTC AAATTAAAGT TATTCTTTTG GCTCTGGTCA 0700
GGGCCCTGAA GAGCATGACG TTCCTCTTGA TGTTGCTGCT TATCTTCTTC 0750
TACATTTTTG CTGTGACTGG TGTCTACTTC TTCAGAGAAT ATTCCCGATC 0800
AACTATCGAG GGCCTGGAGT ACAACATGTT CTTCTCGGAC CTACTAAATT 0850
CACTGGTGAC AGTGTTCATC CTCTTCACCT TGGATCATTG GTATGCAGTA 0900
CTTCAGAATA TCTGGAAGGT GCCAGAATCT AGCCGTGTCT TTAGCAGCAT 0950
CTATGTTATC CTTTGGTTGC TGCTTGGCTC CATAATCTTT CGAAATATCA 1000
TAATAGCCAT GATGGTTACT AACTTTCAGA ATATCAGAAG TGAGCTGAGT 1050
GAGGAGATGA GCCACCTGGA GGTTCAGTAT AAAGCTGACA TGTTCAAGCA 1100
ACAGATTATC CAGAGGAGAC AGCACTCTGA ATCACTAAGA GGACCAGTC 1150
TTGGAAAGGT CTCCGAAGAC ATAATAGAAA CTTCTGATGC TAGTGATGAT 1200
GATGACGATG ACGACGATGA TGACGACGAC GATGATGATG ATGATGATGA 1250
CAAAAGCGAT GCTACTGAAA GCGATGGCGA GGAAAGCGAT AGTGAGAATA 1300
GTGAGAGTGA GAATAGCGAG AGCGAGAAAA TTGATCCTGA GAAAGACTAT 1350
GCCAAGAAAA GCTATCCTGA GAAAAGCCAT CCTGAGAAAA GCTATCCTGA 1400
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GAAAAGCCAT CCTGAGAAAA GCTATCCTGA GAAAAGCCAT CCTGAGAAAA 1450
GCTATGATGA ACAGGCTGAA GCTGAAAAAG TAAAAGAAGA GTCAAAAGAA 1500
AAAGCCTACC CAGTTTCCCA TTCAATCTCG TCCCATGGCT CCATTGCAGC 1550
CGATACTGCT TTCCTTGAAA ACCTGGACTG GGAGACCCTT GTGCATGAGA 1600
ACCTGCCTGG GCTAATGGAC ATGGATCAGG ATGACGCATT GTCTGGCCC 1650
AGAGACTCAC TCTTCCGATA TTTCGAGTTA CTGGAAAAGC TTCAGTATAA 1700
CCTAGAAGAG CGCAAGAAGT TACAAGAATT TGCAGTCCAG GCCCTGATGA 1750
GTTTTGAAGA CAAGTGA                                     1767
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SEQ ID NO: 6 (murine CatSper2 protein sequence)

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MAQEQGHFQL LRADAIRSKL IDTFSLIEHL QGLSQAVPRH TLREILDPAY 0050
QQKLMSGDQE QLVRFSIKPR RMGHITHSRR LLSRLRVRCS RMPPLSLWAG 0100
WVLDSSVFSK FIISLIFLNT FVLMVEIELM ESTNTALWPV KLALEVADWF 0150
ILLSFIVEIL LMWLASFSLF WKDAWNVFDF FVTLLSLLPE LVVLLGVPAH 0200
SVWLQLLRVC RVLRSLKLFA RFRQIKVILL ALVRALKSMT FLLMLLLIFF 0250
YIFAVTGVYF FREYSRSTIE GLEYNMFFSD LLNSLVTVFI LFTLDHWYAV 0300
LQNIWKVPES SRVFSSIYVI LWLLLGSIIF RNIIIAMMVT NFQNIRSELS 0350
EEMSHLEVQY KADMFKQQII QRRQHSESLR GTSLGKVSED IIETSDASDD 0400
DDDDDDDDD DDDDDDDKSD ATESDGEESD SENSESENSE SEKIDPEKDY 0450
AKKSYPEKSH PEKSYPEKSH PEKSYPEKSH PEKSYDEQAE AEKVKEESKE 0500
KAYPVSHSIS SHGSIAADTA FLENLDWETL VHENLPGLMD MDQDDRIVWP 0550
RDSLFRYFEL LEKLQYNLEE RKKLQEFAVQ ALMSFEDK             0588
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